Supplementary Material (ESI) for Green Chemistry

Fe^{III}–TAML-Catalyzed Green Oxidative Degradation of the Azo Dye Orange II by H_2O_2 and Organic Peroxides: Products, Toxicity, Kinetics, and Mechanisms

Naima Chahbane, Delia-Laura Popescu, Douglas A. Mitchell, Arani Chanda,

Dieter Lenoir, Alexander D. Ryabov, Karl-Werner Schramm, and Terrence J. Collins

SUPPORTING INFORMATION

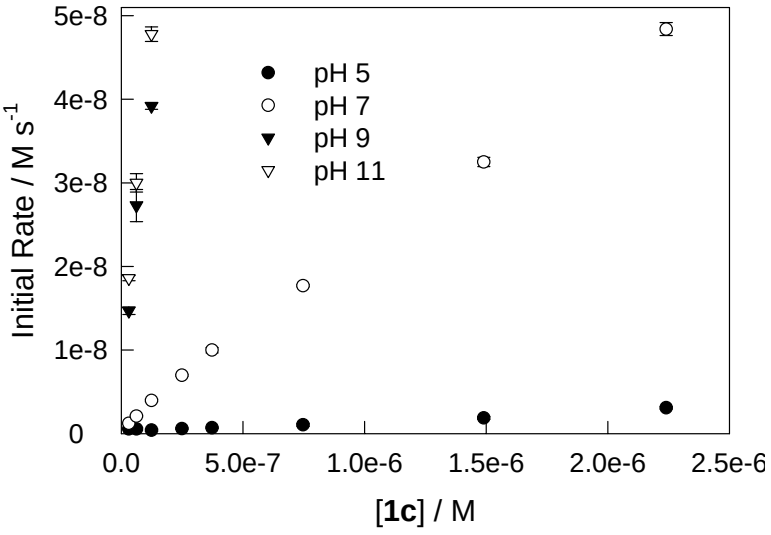

Fig 1S. Initial rates of **1c**-catalyzed bleaching of Orange II by H_2O_2 as a function of [**1c**] at different pH. Conditions: [Orange II] = 4.5×10^{-4} M, [H_2O_2] = 3.3×10^{-4} M, 25 °C, 0.01 M phosphate.

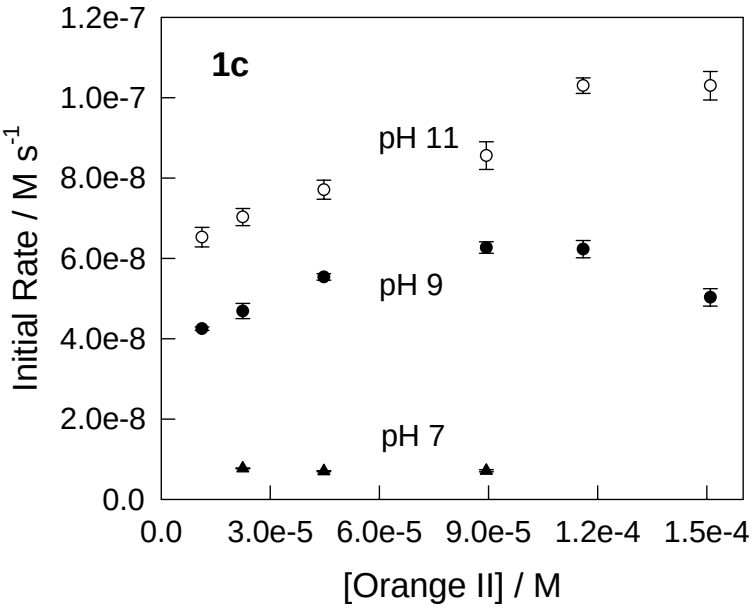

Fig 2S. Initial rate of **1c**-catalyzed Orange II bleaching by H_2O_2 as a function of Orange II concentration. Conditions: [**1c**] = 2.5×10^{-7} M, [H_2O_2] = 3.3×10^{-4} M.

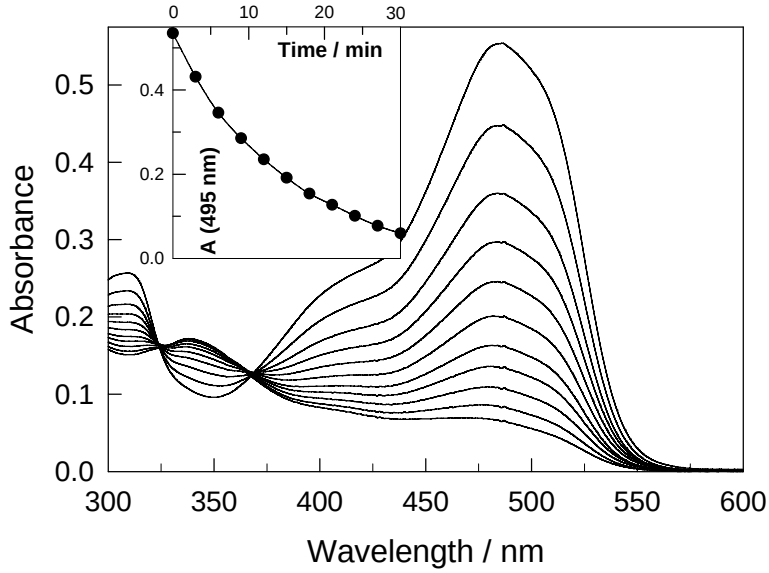

Fig 3S. Spectral changes that accompany the catalytic oxidation of Orange II dye by benzoyl peroxide in the presence of **1a**. Conditions: pH 9 (0.01 M phosphate), 25 ºC, [Orange II] = 2.7×10^{-5} M, [**1a**] = 1.8×10^{-8} M, [benzoyl peroxide] = 4.7×10^{-5} M. Spectra were recorded within 3 min interval. **Inset** shows absorbance *versus* time change at 495 nm.